

## ABSTRACT OF THE DISCLOSURE

A molten metal pump system which includes a particle relief passageway between the vanes on the impeller and the pump base, the particle relief passageway being a predetermined size to allow particles of a predetermined size to pass between the plurality of vanes and the interior walls of the impeller aperture of the pump base. Part or all of the particle relief passageway may, but need not, be as a result of a shoulder on the radially outward end of the plurality of vanes in the inlet side of the impeller.

TOP SECRET//SI//EYES ONLY